

In the Claims:

1. (Previously Presented) A power converter, comprising:
an input circuit having
a rectifier configured for receiving a full-wave AC signal along a first
conductive path and a second conductive path, the rectifier including
a single diode rectifier and
a filter that includes a non-electrolytic capacitor connected in series with
the rectifier and across the first and second conductive paths, that includes a conductive
impedance element connected in series with the non-electrolytic capacitor and arranged
to extend the second conductive path to common, the filter providing a DC voltage
output; and
a switched mode power supply IC arranged to receive the DC voltage output from
the filter.
2. (Previously Presented) A power converter as claimed in claim 1, wherein the
non-electrolytic capacitor has a capacitance of about 100 nF.
3. (Previously Presented) A power converter as claimed in claim 1, wherein the filter
further includes an inrush resistor, the conductive impedance element includes a coil, and
an electrolytic capacitor, the inrush resistor connected at one end to the single diode
rectifier and to one electrode of the non-electrolytic capacitor and at the other end to one
electrode of the electrolytic capacitor, and the coil connected at one end to the other
electrode of the non-electrolytic capacitor and at the other end to the other electrode of
the electrolytic capacitor.
4. (Previously Presented) A power converter as claimed in claim 3, wherein the
electrolytic capacitor has a capacitance of about 10 μ F.

5. (Previously Presented) A power converter as claimed in claim 3, wherein the coil and the non-electrolytic capacitor are arranged to filter distortions caused by the switched mode power supply IC.
6. (Previously Presented) A power converter, comprising:
an input circuit having a rectifier configured for receiving a full-wave AC signal along a first conductive path and a second conductive path, the rectifier including a single diode rectifier and a filter that includes an inrush resistor, a coil, an electrolytic capacitor, and a non-electrolytic capacitor connected in series with the rectifier, the coil connected in series with the non-electrolytic capacitor and arranged to extend the second conductive path to common, and the filter providing a DC voltage output at a circuit node connecting the inrush resistor and one electrode of the electrolytic capacitor, and wherein the coil and the inrush resistor are connected in parallel between the non-electrolytic capacitor and the electrolytic capacitor, and a switched mode power supply IC arranged to receive the DC voltage output from the filter.
7. (Previously Presented) A power converter as claimed in claim 1, wherein the DC voltage output of the filter is applied to a series connection of a primary winding, the switched mode power supply IC, and a resistor.
8. (Previously Presented) A power converter as claimed in claim 1, wherein the switched mode power supply IC includes a high gain feedback loop.
9. (Previously Presented) A power converter as claimed in claim 8, wherein the high gain feedback loop includes a multiplier arranged to diminish ripple caused by the non-electrolytic capacitor.
10. (Previously Presented) A power converter as claimed in claim 9, wherein the multiplier is a factor 10 multiplier.

11. (Previously Presented) A power converter as claimed in claim 1, wherein the switched mode power supply IC includes an internal start-up circuit having a high-voltage start-up current source and without provision of any dissipative bleeder resistor.

12. (Previously Presented) A power converter, comprising:

an input circuit having a rectifier configured for receiving a full-wave AC signal along a first conductive path and a second conductive path, the rectifier including a single diode rectifier and a filter providing a DC voltage output, the filter including a non-electrolytic capacitor connected in series with the rectifier, a electrolytic capacitor, an inrush resistor, and a coil arranged in parallel with the inrush resistor between the electrolytic capacitor and the non-electrolytic capacitor and arranged to extend the second conductive path to common; and

a switched mode power supply IC arranged to receive the DC voltage output from the filter.

13. (Previously Presented) A power converter as claimed in claim 12, wherein the electrolytic capacitor has a capacitance of about 10 μ F.

14. (Previously Presented) A power converter as claimed in claim 6, wherein the single diode rectifier has one terminal connected to the non-electrolytic capacitor and to the inrush resistor.

15. (Previously Presented) A power converter as claimed in claim 6, wherein the single diode rectifier has one terminal connected to one end of the non-electrolytic capacitor and to one end of the inrush resistor, wherein the other end of the non-electrolytic capacitor is connected to one end of the coil, wherein the other end of the inrush resistor is connected to one electrode of the electrolytic capacitor, wherein the other electrode of the electrolytic capacitor is connected to the other end of the coil and common, and wherein the switched mode power supply IC is arranged to provide a DC power signal relative to common.